

# MATH 114 – A02 Analytic Geometry and Calculus II

## Summer 2022

<b>Instructor:</b> <i>Gabriela Bulancea</i> <b>E-mail</b> <a href="mailto:gbulance@gmu.edu">gbulance@gmu.edu</a>
<b>Lecture</b> – asynchronous; see the Blackboard page of the course for information <b>Recitation</b> - synchronous; live sessions: TR 12:00 – 1:15 pm (use the Class for Zoom link on Blackboard to join) <b>Office Hours:</b> MTR 3 - 4 pm, W 1-2 pm, or by appointment (use the Office Hours link on Blackboard)
<b>Final Exam</b> Friday, June 24, 2022

**Textbook:** *Thomas' Calculus (Early Transcendentals)* by Hass, Heil and Weir (fourteenth edition, Pearson publisher). We cover most of Chapters 6 to 11. We will also use MyMathLab from Pearson, which comes bundled with the book in the various formats.

**Prerequisites:** C or better in Calculus I (MATH 113).

**Broad purpose of the course:** At the end of the semester the student should be able to solve various geometry and physics problems that require the use of definite integrals, use techniques of to evaluate integrals, understand infinite series and power series, and be able to identify and graph conic sections and basic parametric and polar curves.

### Class Policies

#### 1. Technology:

- The synchronous recitations will be conducted via Class for Zoom sessions (see instructions on Blackboard). You are expected to attend these live sessions.
- The exams will be administered online proctored through the GMU Testing Center. **To take the exams you will need two devices (with working cameras)**, a computer for your exam and a tablet/phone for your zoom call.
- We will be using the online homework system MyMathLab for which you need to the access code associated with the textbook.
- We will be using a Harmonize discussion board for posting questions and answers related to the material we discuss in class or to class logistics.

#### 2. Teaching and learning method: As a university student, you are responsible for your own learning. **Expect to work 5-6 hours per day on assignments for this course (this includes watching pre-recorded lectures, answering the Check Your Understanding questions, completing the quizzes and homework assignments).**

- Pre-recorded lectures, discussion, problem-solving, tests, and group tasks will be used to help you learn. Recitation attendance and completion of assignments are expected.
- Pre-recorded lectures will be posted on the Blackboard page of the course in the Learn Here lesson folders. You should watch these recordings before our live meetings in which we will be solving problems related to the material covered in the corresponding recordings.

### 3. Communication:

- You will receive daily Blackboard announcements regarding homework, quizzes, exams, and specific readings for the following day.
  - If you have questions of general interest, please post them on Harmonize, so everybody can benefit from having the answer to that question. If you have questions about your academic performance in the class or questions of a confidential nature, please send them to me via email.
4. **Recitations:** conducted via live sessions on Class for Zoom. During recitation we will work on problems related to the material covered in the corresponding pre-recorded lectures. During each session, you will be asked to work in groups on assigned problems.
5. **Homework:** There will be online homework problems from each section, which will be graded. **Unless otherwise stated**, all assignments are due by the end of the day for which they are assigned. For purposes of this course, a day is defined as **beginning at 12:01 am and ending at 11:59 pm. To access the mymathlab assignments, please use the links posted in each of the Learn Here lesson folders.**
6. **Quizzes:** There will be quizzes posted in each lesson folder. Quiz problems are randomly selected from the same pool of questions that will be used for your exams. You will have 20 minutes to submit your answers to simulate the timed exam environment. You can take each quiz up to 3 times, but questions will vary on each attempt. Only your highest score will be recorded in the grade center. Your two lowest quiz scores will be dropped in the final grade calculation.
7. **Tests: The exams will be administered online and proctored through the Math Testing Center. There is a tentative schedule for tests below. You are responsible for keeping up with all information announced in the classroom and on Blackboard. There will be no makeup tests.** You may replace your lowest test grade with your final exam percentage.
8. **Class participation:** Your participation in class discussion, contributions to the discussion board and regular attendance of office hours will count towards your class participation grade.
9. **Grading:** Grades will be assigned according to the percent system given below:

20% Test 1 Thursday, June 2

20% Test 2 Friday, June 10

25% Final Exam Friday, June 24

10% Homework

10% Quizzes

10% Recitation

5% Class participation: based on your participation to in class activities, discussion board contributions, office hours attendance.

#### Grading scale:

A-: 90 - 92;	A: 92 - 98;	A+: 98 - 100
B-: 80 - 82;	B: 82 - 88;	B+: 88 - 90
C-: 70 - 72;	C: 72 - 78;	C+ : 78 - 80
D: 60 - 70;	F: 0 - 60.	

#### 10. Additional Help:

- *Office hours (use the Office Hours link on Blackboard).*
- *The Math Tutoring Center (see <http://math.gmu.edu> for information about how to access the Tutoring Center and for the current schedule).*

## UNIVERSITY POLICIES:

- The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at <http://universitypolicy.gmu.edu/>. All members of the university community are responsible for knowing and following established policies.
- **Honor Code:** - It is expected that each student in this class will conduct themselves within the guidelines of the Honor Code. Given the format of the class, it is important to point out that sharing with anyone information of any kind about exams or quizzes before, during, or after taking a test, or using online resources during exams will result at a minimum in a grade of zero for all parties involved. Violations will also be reported to the university Honor committee where further consequences such as probation or expulsion from the university may be incurred. See <http://academicintegrity.gmu.edu/honorcode> for a copy of the Honor code.
- **Disability Services:** Reasonable accommodations are available for students who have a documented disability. Please contact Disability Services if you require accommodations.
- **COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS):** <http://caps.gmu.edu>

## Schedule for Math 114 Summer 2022

Days	Lessons	Assignments	Due Dates
Day 1 5/23	Lesson 1: Chapter 5 and Section 6.1	<ul style="list-style-type: none"><li>• Review Chapter 5</li><li>• Read Chapter 6.1</li><li>• Watch the Lectures</li><li>• Check your understanding</li><li>• Complete Ice Breaker Activity (Introductions)</li><li>• Complete MyLabMath (MLM) Homework</li><li>• Complete Weekly Quiz (BB)</li><li>• Post any course questions (optional)</li><li>• Attend the recitation</li></ul>	<b>Due Date: 5/25</b>  <b>Discussion Assignment</b> <ul style="list-style-type: none"><li>• Initial Post by 5/24</li><li>• Replies by 5/25</li></ul>

<p><b>Day 2 and 3</b> <b>5/24 and 5/25</b></p>	<p><b>Lesson 2:</b> Sections 6.2 and 6.3</p>	<ul style="list-style-type: none"> <li>• Read Chapter sections 6.2 and 6.3</li> <li>• Watch the Lectures</li> <li>• Check your understanding</li> <li>• Complete MyLabMath (MLM) Homework</li> <li>• Complete Weekly Quiz (BB)</li> <li>• Lesson Pulse Check Poll (optional)</li> <li>• Attend the recitation</li> </ul>	<p><b>Due Date: 5/27</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>• Initial Post by 5/26</li> <li>• Reply by 5/27</li> </ul>
<p><b>Day 4</b> <b>5/26</b></p>	<p><b>Lesson 3:</b> Sections 6.4, 6.5, 6.6 and 7.1</p>	<ul style="list-style-type: none"> <li>• Read Sections 6.4, 6.5, 6.6, and 7.1</li> <li>• Watch Lesson 3 Lectures</li> <li>• Check your understanding</li> <li>• Complete MyLabMath (MLM) Homework</li> <li>• Complete Weekly Quiz (BB)</li> <li>• Receive a reward (optional; only for those who got perfect score on the quiz).</li> <li>• Attend the recitation</li> </ul>	<p><b>Due Date: 5/28</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>• Initial Post by 5/27</li> <li>• Reply by 5/28</li> </ul>
<p><b>Day 5</b> <b>5/27</b></p>	<p><b>Lesson 4:</b> Sections 7.2, 7.3 and 7.4</p>	<ul style="list-style-type: none"> <li>• Read Sections 7.2, 7.3 and 7.4</li> <li>• Watch Lesson 4 Lectures</li> <li>• Check your understanding</li> <li>• Complete MyLabMath (MLM) Homework</li> <li>• Complete Weekly Quiz (BB)</li> <li>• Post your Exam Review questions (optional)</li> <li>• Attend the recitation</li> </ul>	<p><b>Due Date: 5/29</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>• Initial Post by 5/27</li> <li>• Reply by 5/29</li> </ul>
<p><b>Day 6</b> <b>5/31</b></p>	<p><b>Lesson 5:</b> Sections 8.2 and 8.3</p>	<ul style="list-style-type: none"> <li>• Read Sections 8.2 and 8.3</li> <li>• Review Lesson Lectures</li> <li>• Check your understanding</li> <li>• Complete MyLabMath (MLM) Homework</li> <li>• Complete Weekly Quiz (BB)</li> <li>• Attend the recitation</li> <li>• Pulse Check Poll (optional, not graded)</li> </ul>	<p><b>Due Date: 6/3</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>• Initial Post by 6/2</li> <li>• Reply by 6/3</li> </ul>
<p><b>Days 7 and 9</b> <b>6/1 and 6/3</b></p>	<p><b>Lesson 6:</b> Sections 8.4 and 8.5</p>	<ul style="list-style-type: none"> <li>• Read Sections 8.4 and 8.5</li> <li>• Review Lesson Lectures</li> <li>• Check your understanding</li> <li>• Complete MyLabMath (MLM) Homework</li> <li>• Complete Weekly Quiz (BB)</li> <li>• Attend the recitation</li> </ul>	<p><b>Due Date: 6/5</b></p> <p><b>Check Your Understanding Assignment:</b></p>

		<ul style="list-style-type: none"> <li>Lesson Pulse Check Poll (optional)</li> </ul>	<ul style="list-style-type: none"> <li>Initial Post by 6/3</li> <li>Reply by 6/5</li> </ul>
<b>Day 8</b> 6/2		<p><b>Exam 1</b></p> <ul style="list-style-type: none"> <li>online proctored through the Math Testing Center</li> <li>covers sections 6.1 through 7.4</li> </ul>	
<b>Day 10</b> 6/6	<b>Lesson 7:</b> Sections 8.7 and 8.8	<ul style="list-style-type: none"> <li>Read Sections 8.7 and 8.8</li> <li>Review Lesson Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> <li>Attend the recitation</li> </ul>	<p><b>Due Date: 6/8</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>Initial Post by 6/7</li> <li>Reply by 6/8</li> </ul>
<b>Day 11</b> 6/7	<b>Lesson 8:</b> Sections 10.1	<ul style="list-style-type: none"> <li>Read Section 10.1</li> <li>Review Lesson 8 Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> <li>Attend the recitation</li> </ul>	<p><b>Due Date: 6/9</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>Initial Post by 6/</li> <li>Reply by 6/9</li> </ul>
<b>Day 12</b> 6/8	<b>Lesson 9:</b> Section 10.2	<ul style="list-style-type: none"> <li>Read Section 10.2</li> <li>Review Lesson Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> <li>Attend the recitation</li> </ul>	<p><b>Due Date: 6/10</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>Initial Post by 6/9</li> <li>Reply by 6/10</li> </ul>
<b>Day 13</b> 6/9	<b>Lesson 10:</b> Sections 10.3 and 10.4	<ul style="list-style-type: none"> <li>Read Chapter Sections 10.3 and 10.4</li> <li>Review Lesson Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> </ul>	<p><b>Due Date: 6/12</b></p> <p><b>Check Your Understanding Assignment:</b></p>

		<ul style="list-style-type: none"> <li>Attend the recitation</li> </ul>	<ul style="list-style-type: none"> <li>Initial Post by 6/12</li> <li>Reply by 6/13</li> </ul>
<b>Day 14</b> <b>6/10</b>		<p><b>Exam 2</b></p> <ul style="list-style-type: none"> <li>Online proctored through the Math Testing Center</li> <li>Covers sections 8.2 through 10.2</li> </ul>	
<b>Day 15 and 16</b> <b>6/13 and 6/14</b>	<b>Lesson 11:</b> Sections 10.5, 10.6, and 10.7	<ul style="list-style-type: none"> <li>Read Chapter Sections 10.5, 10.6, and 10.7</li> <li>Review Lesson Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> <li>Attend the recitation</li> </ul>	<p><b>Due Date: 6/14</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>Initial Post by 6/13</li> <li>Reply by 6/14</li> </ul>
<b>Day 17 and 18</b> <b>6/15, 6/16</b>	<b>Lesson 12:</b> Sections 10.8, 10.9, and 10.10	<ul style="list-style-type: none"> <li>Read Sections 10.8, 10.9, and 10.10</li> <li>Review Lesson 13 Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> <li>Attend the recitation</li> </ul>	<p><b>Due Date: 6/16</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>Initial Post by 6/15</li> <li>Reply by 6/16</li> </ul>
<b>Days 19 and 20</b> <b>6/17 and 6/21</b>	<b>Lesson 13:</b> Sections 11.1, 11.2, 11.3, and 11.6	<ul style="list-style-type: none"> <li>Read Chapter 11.1, 11.2, 11.3, and 11.6</li> <li>Review Module 14 Lectures</li> <li>Check your understanding</li> <li>Complete MyLabMath (MLM) Homework</li> <li>Complete Weekly Quiz (BB)</li> <li>Attend the recitation</li> </ul>	<p><b>Due Date: 6/22</b></p> <p><b>Check Your Understanding Assignment:</b></p> <ul style="list-style-type: none"> <li>Initial Post by 6/21</li> <li>Reply by 6/22</li> </ul>
<b>Day 21</b> <b>6/22</b>	<b>Final Exam Review</b>	Synchronous review session (recorded)	
<b>6/24</b>		<b>Final Exam</b> – online proctored through the Math Testing Center; cumulative	

